

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P558219

Luminaire Tested: **FUSL-12-4-LD4-3STD-30-UNV-81-94-EDD**

Issue Date: 7/16/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: P558219
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2105-257-2)
Test Lab: INNOVATION CENTER
Issue Date: 7/16/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FUSL-12-4-LD4-3STD-30-UNV-81-94-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

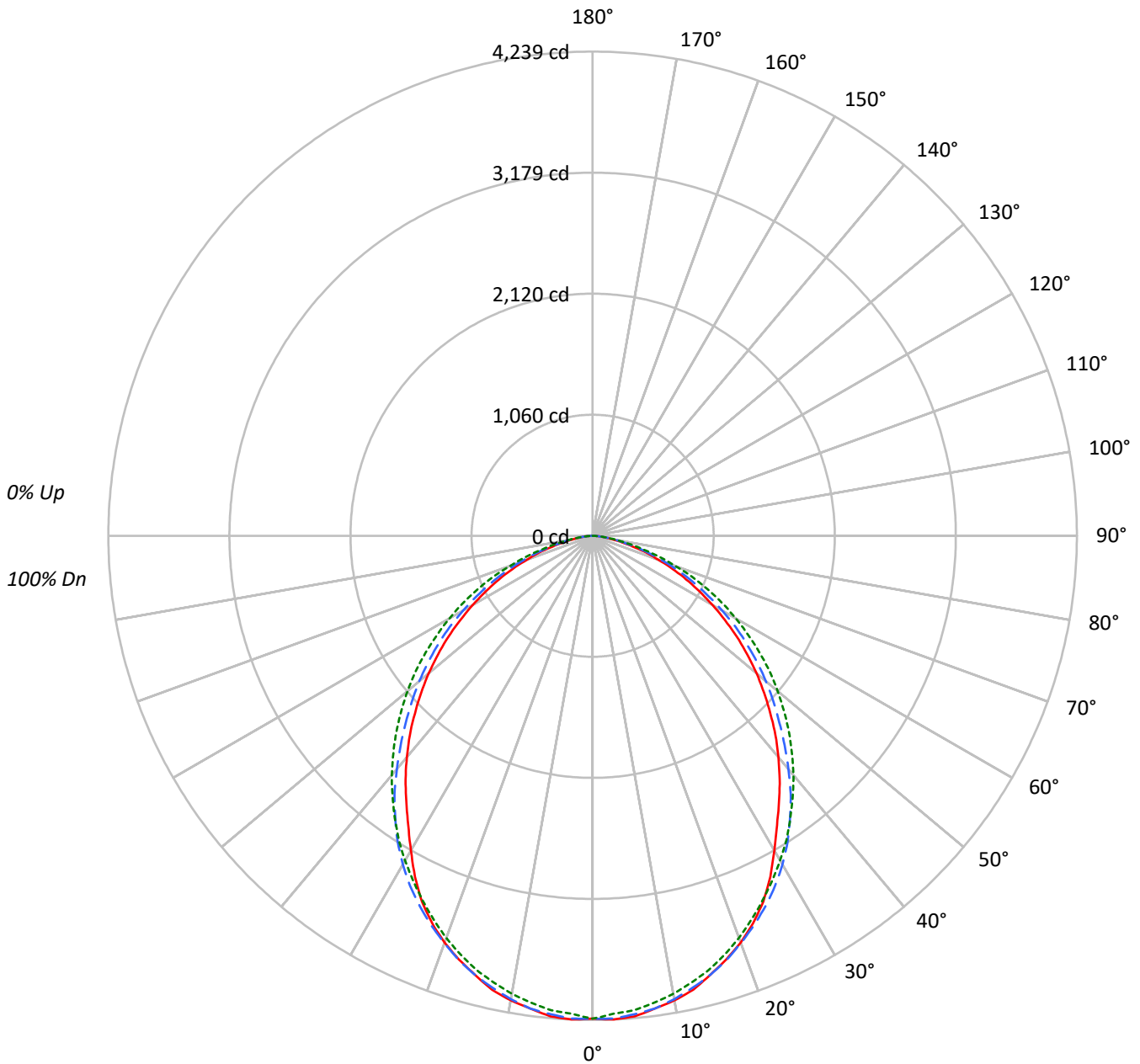
Lumens per Lamp: N/A
Luminaire Lumens: 9776.0 lumens
Efficiency: N/A
Efficacy: 97.9 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

TEST NUMBER: P558219

CATALOG NUMBER: FUSL-12-4-LD4-3STD-30-UNV-81-94-EDD

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86																			
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73																			
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63																			
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54																			
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47																			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42																			
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37																			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34																			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30																			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11377	11377	11377
5°	11407	11359	11263
10°	11286	11255	11126
15°	11086	11086	10959
20°	10851	10865	10726
25°	10494	10624	10455
30°	9882	10326	10200
35°	9338	9898	9914
40°	8884	9363	9608
45°	8375	8796	9247
50°	7840	8289	8853
55°	7232	7712	8374
60°	6513	7037	7789
65°	5750	6257	7084
70°	4792	5329	6019
75°	3766	4256	4712
80°	2693	2996	3322
85°	1754	1754	1655



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	398.1	4.1
10°-20°	1118.3	11.4
20°-30°	1634.2	16.7
30°-40°	1855.0	19.0
40°-50°	1790.7	18.3
50°-60°	1477.2	15.1
60°-70°	983.7	10.1
70°-80°	440.2	4.5
80°-90°	78.7	0.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	3150.5	32.2
0°-40°	5005.5	51.2
0°-60°	8273.4	84.6
0°-90°	9776.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9776.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4228	4228	4228	4228	4228	
5°	4223	4221	4205	4182	4169	400
15°	3979	3989	3979	3962	3934	1122
25°	3534	3562	3578	3552	3521	1619
35°	2842	2881	3013	3029	3018	1781
45°	2201	2238	2311	2417	2430	1698
55°	1541	1567	1644	1735	1785	1376
65°	903	927	983	1052	1113	895
75°	362	382	409	429	453	396
85°	57	57	57	54	54	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4227.9	4227.9	4227.9	4227.9	4227.9
2.5°	4239.2	4240.9	4231.1	4205.1	4188.9
5°	4223.0	4221.4	4205.1	4182.4	4169.4
7.5°	4175.9	4179.1	4174.3	4141.8	4123.9
10°	4130.4	4132.0	4119.0	4093.1	4071.9
12.5°	4071.9	4070.3	4052.5	4039.5	4005.3
15°	3979.4	3989.1	3979.4	3961.5	3933.9
17.5°	3890.0	3890.0	3896.5	3865.7	3844.5
20°	3789.3	3794.2	3794.2	3769.8	3745.5
22.5°	3672.4	3687.0	3691.9	3665.9	3636.6
25°	3534.3	3561.9	3578.2	3552.2	3521.3
27.5°	3367.0	3409.3	3458.0	3438.5	3404.4
30°	3180.2	3242.0	3323.2	3306.9	3282.6
32.5°	3003.2	3064.9	3177.0	3170.5	3157.5
35°	2842.4	2881.4	3012.9	3029.2	3017.8
37.5°	2689.7	2725.5	2848.9	2886.3	2876.5
40°	2528.9	2567.9	2665.4	2732.0	2735.2
42.5°	2369.7	2407.1	2486.7	2582.5	2582.5
45°	2200.8	2238.2	2311.3	2416.9	2429.8
47.5°	2035.2	2074.1	2145.6	2251.2	2272.3
50°	1872.7	1908.5	1979.9	2082.3	2114.7
52.5°	1703.8	1742.8	1812.6	1906.8	1953.9
55°	1541.4	1567.4	1643.7	1734.7	1785.0
57.5°	1372.5	1396.8	1482.9	1560.9	1612.9
60°	1210.1	1240.9	1307.5	1387.1	1447.2
62.5°	1054.1	1086.6	1143.5	1213.3	1281.5
65°	903.1	927.4	982.7	1052.5	1112.6
67.5°	756.9	778.0	833.2	882.0	945.3
70°	609.1	636.7	677.3	724.4	765.0
72.5°	490.5	501.9	536.0	570.1	612.3
75°	362.2	381.7	409.3	428.8	453.2
77.5°	259.9	271.2	287.5	303.7	326.5
80°	173.8	178.7	193.3	196.5	214.4
82.5°	105.6	108.8	112.1	113.7	120.2
85°	56.8	56.8	56.8	53.6	53.6
87.5°	32.5	32.5	27.6	22.7	16.2
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)